

**353 McKibbin Street**  
**Draft Upland Site Summary**

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**353 MCKIBBIN STREET (DAR SITE ID #111)**

Address: 353 McKibbin Street, Brooklyn, New York 11206  
Tax Lot Parcel(s): Brooklyn Block 3083, Lots 16 and 30  
Latitude: 40.706624  
Longitude: -73.934203  
Regulatory Programs/  
Numbers/Codes: NYSDEC No. C224102, BCP Site No. C224102  
Analytical Data Status: ☐ Electronic Data Available ☒ Hardcopies only  
☐ No Data Available

**1 SUMMARY OF CONSTITUENTS OF POTENTIAL CONCERN (COPCs) TRANSPORT PATHWAYS TO THE CREEK**

The current understanding of the transport mechanisms of COPCs from the upland portions of the 353 McKibbin Street site (site) to Newtown Creek is summarized in this section and Table 1 and supported in the following sections.

**Overland Transport**

The site is located approximately 1,088 feet from Newtown Creek and associated waterways. This is not a complete historical or current pathway.

**Bank Erosion**

The site is not adjacent to Newtown Creek or associated waterways. This is not a complete historical or current pathway.

**Groundwater**

Groundwater investigations indicate historical groundwater contamination at the site. Volatile organic compound (VOC), metal, and pesticide concentrations were detected above New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Class GA groundwater standards in samples collected at the site. VOC exceedances were detected in both shallow and deep groundwater samples. The site is located approximately 1,088 feet northeast and upgradient from English Kills, a tributary to Newtown Creek. The predominant groundwater table flow is

north-northwest, and the deep groundwater flow is to the north (BL Companies 2007; NYSDEC 2012). This pathway is potentially historically and currently complete.

### **Overwater Activities**

This site is not adjacent to Newtown Creek or associated waterways and has no overwater activities. This is not a complete historical or current pathway.

### **Stormwater/Wastewater Systems**

Information regarding on-site stormwater infrastructure and management was not identified in documents available for review. This site is within the Newtown Creek Water Pollution Control Plant (WPCP) sewershed. Stormwater and wastewater discharges from the site flow into two distinct combined municipal sewer systems. When combined flows exceed the system's capacity, untreated combined sewer overflows (CSOs) are discharged to the East River, which is outside of the Newtown Creek study area, and also to Newtown Creek at Outfall NC-015 (NYCDEP 2007). There is insufficient evidence to make a historical or current pathway determination for direct discharge of stormwater and wastewater, and sewer/CSO.

### **Air Releases**

Information regarding site air discharges was not identified in documents available for review. There is insufficient evidence to make a historical or current pathway determination.

## **2 PROJECT STATUS**

The site was issued a Brownfield Site Certificate of Completion in 2011 (NYSDEC 2012). The site was previously in the NYSDEC Brownfield Cleanup Program (BCP; Site No. C224102) under a BCP Agreement (Index No. W2-1054-05-03) between Mehadrin Dairy Corporation and NYSDEC, executed on April 19, 2005 (BL Companies 2007; NYSDEC 2012). A summary of investigation and remedial activities at the site is provided in the following table:

Activity		Date(s)/Comments
Phase 1 Environmental Site Assessment	<input checked="" type="checkbox"/>	Phase I Environmental Site Assessment completed in March 2003 by Public Service Testing Laboratories, Inc. (BL Companies 2007). Phase II Site Investigation completed in October 2003 by Galli Engineering, PC (BL Companies 2007).
Site Characterization	<input checked="" type="checkbox"/>	Site Characterization investigation activities commenced in November 2005 (BL Companies 2007).
Remedial Investigation	<input checked="" type="checkbox"/>	Completed in August 2008 (NYSDEC 2012).
Remedy Selection	<input checked="" type="checkbox"/>	Remedial Action Work Plan approved in August 2008 (EDR 2010).
Remedial Design/Remedial Action Implementation	<input checked="" type="checkbox"/>	Remedial Design, including air sparging and soil vapor extraction systems, completed in February 2009 (EDR 2010; NYSDEC 2012).
Use Restrictions (Environmental Easements or Institutional Controls)	<input checked="" type="checkbox"/>	Environmental easement granted in October 2011 (NYSDEC 2011). Other restrictions: Cover System, Groundwater Use Restriction, IC/EC Plan, Landuse Restriction, Monitoring Plan, O&M Plan, Site Management Plan, Soil Management Plan, and Vapor Mitigation (NYSDEC 2011).
Construction Completion	<input checked="" type="checkbox"/>	Remedial Action completed in December 2011 (NYSDEC 2012).
Site Closeout/No Further Action Determination	<input checked="" type="checkbox"/>	Brownfield Site Certificate of Completion issued in 2011 (NYSDEC 2012).

## Notes:

EDR – Environmental Data Resources, Inc.

NYSDEC – New York State Department of Environmental Conservation

O&amp;M – operations and maintenance

- NYSDEC Site Code(s): C224102
- NYSDEC Site Manager: Mandy Yau

**3 SITE OWNERSHIP HISTORY**

Respondent Member:

☐ Yes ☒ No

Owner	Years	Occupant	Types of Operations
Unknown	Prior to the 1900s	Vacant	Undeveloped land
Franklin H. Kalbfleisch Company	Early 1900s – unknown	F. H. Kalbfleisch Chemical Works	Chemical manufacturer specializing in the manufacturing of sulfuric acid, suitable for electrolytic liquid in storage batteries
Unknown	ca. 1951 – ca. 1990	Unknown	Lacquer spraying facility
			Paper box storage
Thames Trading Company, Inc.	1983	Unknown	
Richard Penzer	1983		
307 McKibbin Street Realty Corporation	1983 – 1984		
New York City Industrial Development Agency	1984 – 1991		
Harry J. Rashti and Company, Inc.	1991 – 1996	Vacant	Vacant and undeveloped.
BBM, LLC, LFW Dairy Corporation, and Mehadrin Dairy Corporation	1996 – current		Vacant and undeveloped. The planned future use is for the site to be redeveloped as a kosher food warehouse and distribution facility (NYSDEC 2012).

Note:

ca. – circa

NYSDEC – New York State Department of Environmental Conservation

Additional discussion and sources provided in Section 6.

#### 4 PROPERTY DESCRIPTION

The site occupies approximately 1.12 acres and is located approximately 0.31 mile southwest and upgradient from English Kills, a tributary to Newtown Creek. Site topography slopes gently to the southwest, and elevation at the site is approximately 20 feet above mean sea level. The site consists of undeveloped land covered by grass, shrubs, and domestic garbage debris (BL Companies 2007; Google Earth 2012). As part of a proposed redevelopment of the site, Mehadrin Dairy Corporation excavated footing trenches and installed concrete building foundation footings along portions of the northern, eastern, and southern property

boundaries. The footings were installed prior to entering the site into the BCP, and no additional site work has been conducted subsequent to entering into the BCP (BL Companies 2007). A chain-linked fence is located around the perimeter of the site (BL Companies 2007).

The site is bounded by Boerum Street and commercial properties to the north; by Bogart Street and commercial properties to the east; by McKibbin Street, a New York City Park, and residential property to the south; and by a concrete manufacturing facility adjacent and to the west (NYSDEC 2012; Google Earth 2012). The site is zoned for manufacturing, and surrounding parcels are primarily industrial and manufacturing with some residential properties nearby (NYSDEC 2012). Remedial site 2 Ingraham Street (DAR Site ID #24) is located east of the site across Bogart Street, as shown in Figure 1.

## **5 CURRENT SITE USE**

The site, currently owned by BBM, LLC, LFW Dairy Corporation, and Mehadrin Dairy Corporation, is a vacant lot (NYSDEC 2012). Mehadrin Dairy Corporation purchased the site for redevelopment as a kosher food warehouse and distribution facility (BL Companies 2007; NYSDEC 2012).

## **6 SITE USE HISTORY**

Prior to the 1900s, the site was undeveloped land (BL Companies 2007). In the early 1900s, the site, along with the entire block, was occupied by the F. H. Kalbfleisch Chemical Works (Sanborn 1907; NYSDEC 2012). A trade journal reported the F. H. Kalbfleisch Company was a chemical manufacturer specializing in the manufacturing of sulfuric acid, made of pure brimstone and suitable for electrolytic liquid in storage batteries (The Chemical Engineer 1909).

Between 1951 and 1990, the site was occupied for lacquer spraying operations (NYSDEC 2012). In 1965 until sometime around 1990, two separate loft buildings occupied the site, one on Lot 16 and the other on Lot 30 (Sanborn 1965, 1978, 1990). The loft building occupying Lot 16 appeared to be a “Lacquer Spraying” facility; operations conducted in the loft building on Lot 30 were not found in available site records. The south portion of Lot 30 appeared to be used for “Paper Box Storage” (Sanborn 1965, 1978, 1990). A 1983 indenture

between Richard Penzer and 307 McKibbin Street Realty Corporation reported the two buildings at the site had a bridge connection and access to one another through the basement and first floor (Penzer 1983).

Harry J. Rashti and Company, Inc., a former owner of Lots 16 and 30, owns Rashti and Rashti, a manufacturer of baby products, but it is not clear if the manufacturer operated on the site (Rashti and Rashti 2011).

The site became vacant and has been undeveloped since 1991 (NYCDF 2012). Information regarding the demolition of the two loft buildings that historically occupied the site was not found in available documents.

## **7 CURRENT AND HISTORICAL AREAS OF CONCERN AND COPCS**

The current understanding of the historical and current potential upland and overwater areas of concern at the site is summarized in Table 1. The following sections provide brief discussion of the potential sources and COPCs at the site requiring additional discussion.

Potential contaminant areas of concern at the site include areas in which storage battery electrolyte manufacturing and lacquer spraying practices and operations occurred, including a drum disposal area. The COPCs associated with these areas of concern include sulfur, sulfuric acid, chlorinated and non-chlorinated VOCs, semi-volatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), and metals.

### **7.1 Uplands**

Potential contaminant sources at the site include equipment and products used in storage battery electrolyte manufacturing and lacquer spraying practices and operations, including a drum disposal area. The COPCs for these sources include sulfur, sulfuric acid, chlorinated and non-chlorinated VOCs, SVOCs, PAHs, and metals.

### **7.2 Overwater Activities**

This site is not adjacent to Newtown Creek or associated waterways. Information related to overwater activities was not identified in documents available for review.

### 7.3 Spills

Information related to on-site spills was not identified in documents available for review.

## 8 PHYSICAL SITE SETTING

### 8.1 Geology

Topography at the site slopes gently to the southwest, and elevation at the site is approximately 20 feet above mean sea level (BL Companies 2007). Based on historical environmental exploration borings, the site is underlain by approximately 7 feet of urban fill consisting of construction debris, rock, and ash. Glacial deposits beneath the urban fill consist predominately of varying percentages of silt, sand, and gravel (BL Companies 2007; NYSDEC 2012).

### 8.2 Hydrogeology

Groundwater measurements were collected at the site during four sampling events as a part of remedial investigation field activities, and water table elevation contour maps were developed to define the direction of groundwater flow and hydraulic gradient across the site (see Attachments 1 through 6; BL Companies 2007). Groundwater investigations indicated shallow groundwater is present in the fill material or the glacial deposits located beneath the site (BL Companies 2007; NYSDEC 2012). Depth to groundwater is approximately 9 to 15 feet below ground surface (bgs). The predominant groundwater table flow is north-northwest. The deep groundwater flow is to the north (BL Companies 2007; NYSDEC 2012).

## 9 NATURE AND EXTENT (CURRENT UNDERSTANDING OF ENVIRONMENTAL CONDITIONS)

### 9.1 Soil

Soil Investigations

Bank Samples

Soil-Vapor Investigations

☒ Yes ☐ No  
☐ Yes ☐ No ☒ Not Applicable  
☒ Yes ☐ No

### 9.1.1 Soil Investigations

Public Service Testing Laboratories, Inc., completed a Phase I Environmental Site Assessment (ESA) in March 2003 (BL Companies 2007). Based on the past industrial use of the site and waste dumping found during the Phase I ESA, in October 2003, a Phase II Site Investigation was performed by Galli Engineering, PC (BL Companies 2007). During the Phase II Site Investigation, subsurface soil samples were collected at interval depths of 0 to 4 feet bgs, 2 to 12 feet bgs, 4 to 8 feet bgs, 8 to 10 feet bgs, and 8 to 12 feet bgs. No surface samples (0 to 2 feet bgs) were collected during this investigation (BL Companies 2007). Sample results detected VOCs, PAHs, and metals in the soil beneath the site. A photoionization detector (PID) was used to record total organic vapors; readings ranged from 0.0 parts per million (ppm) to 2,488 ppm. Two areas of elevated VOCs were identified: one with elevated levels of trichloroethene (TCE); and one with elevated levels of trimethylbenzenes (BL Companies 2007). Further details on Phase II Site Investigation sampling and analysis methods were not found in available site documents; however, Phase II Site Investigation sampling locations can be found in Attachment 7, and analytes that exceeded their respective recommended soil cleanup standards are summarized in the following table:

Analyte	Units	Maximum Soil Concentration	Sample Location
<b>VOCs</b>			
1,2,4-Trimethylbenzene	ppb	20,455	SB-8
1,3,5-Trimethylbenzene	ppb	3,800	SB-8
Acetone	ppb	318	SB-10
Isopropylbenzene	ppb	2,938	SB-8
n-Propylbenzene	ppb	6,346	SB-8
trichloroethene (TCE)	ppb	191,750	SB-1
<b>SVOCs</b>			
Benzo(a)anthracene	ppb	11,640	SB-3
Benzo(a)pyrene	ppb	8,346	SB-3
Benzo(b)fluoranthene	ppb	7,247	SB-3
Benzo(k)fluoranthene	ppb	6,711	SB-3
Chrysene	ppb	9,189	SB-3
Dibenzo(a,h)anthracene	ppb	992	SB-3
Indeno(1,2,3-cd)pyrene	ppb	4,075	SB-3



Analyte	Units	Maximum Soil Concentration	Sample Location
<b>Metals</b>			
Mercury	ppm	9.60	SB-3
Zinc	ppm	232	SB-1

## Notes:

ppb – parts per billion

ppm – parts per million

SVOC – semi-volatile organic compound

VOC – volatile organic compound

Based on the Phase II Site Investigation findings, review of existing and historical site data and a ground penetrating radar (GPR) survey was completed at the site by BL Companies; a conceptual site model was developed that identified 11 preliminary areas of concern (AOCs) (AOC No. 1 through AOC No. 11), including locations of the former chemical works and lacquer spraying activities, a drum disposal area, and GPR anomalies to be further investigated (see Attachment 8; BL Companies 2007). Potential off-site impacts were also identified from facilities located hydraulically upgradient or crossgradient of the site, based on inferred direction of groundwater flow and proximity to the site (BL Companies 2007).

From December 2005 through October 2006, as part of Site Characterization and Remedial Investigation field activities, 53 soil borings were advanced at the site and four soil borings were advanced off site (MW-6 through MW-9) along the perimeter of the site (BL Companies 2007). During soil boring activities, continuous soil samples were collected and field screened for presence of VOCs using a PID. Two soil samples from each boring were selected for laboratory analysis for the presence of target compound list (TCL) VOCs by U.S. Environmental Protection Agency (USEPA) Method 8260B, TCL SVOCs by USEPA Method 8270, target analyte list (TAL) metals by USEPA Method 6010B, polychlorinated biphenyls (PCBs) by USEPA Method 8082, and/or pesticides by USEPA Method 8081. Additionally, selected samples were analyzed for trimethylbenzene by USEPA Method 8260B (BL Companies 2007). Subsurface soil samples were collected at depths ranging from 13 to 28 feet bgs. No surface samples (0 to 2 feet bgs) were collected during this investigation (BL Companies 2007). Analytes that exceeded their respective NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 Recommended Soil Cleanup Objectives are summarized in the following table:

Analyte	Units	Maximum Soil Concentration	Sample Location
<b>VOCs</b>			
1,1,2,2-tetrachloroethane	ppb	1,100	GP-10
Acetone	ppb	1,800	GP-23
Ethylbenzene	ppb	6,200	GP-33
Methyl ethyl ketone	ppb	430	MW-4
Methylene chloride	ppb	1,000	GP-23
Trans-1,2-dichloroethene	ppb	1,200	GP-23
trichloroethene (TCE)	ppb	250,000	GP-2
Total xylenes	ppb	2,700	GP-33
<b>SVOCs</b>			
2-methylphenol	ppb	230	GP-2
Benzo(a)anthracene	ppb	3,600	GP-6
Benzo(a)pyrene	ppb	3,300	GP-6
Benzo(b)fluoranthene	ppb	3,800	GP-6
Benzo(k)fluoranthene	ppb	1,500	GP-6
Chrysene	ppb	3,400	GP-6
Dibenzo(a,h)anthracene	ppb	580	GP-6
<b>Metals</b>			
Aluminum	ppm	13,200	GP-5
Mercury	ppm	5.3	GP-6

## Notes:

ppb – parts per billion

ppm – parts per million

SVOC – semi-volatile organic compound

VOC – volatile organic compound

Light nonaqueous phase liquid (LNAPL) was observed in subsurface soils collected from GP-2 and GP-10 at depth intervals of 7 to 8 feet bgs and 8 to 12 feet bgs, respectively (BL Companies 2007). The LNAPL observed was described as either “free-phase product/oil” (i.e., nonaqueous phase liquid [LNAPL] saturation of soil interstitial pore spaces) or “oily” sheen (i.e., iridescent petroleum-like sheen; BL Companies 2007). No additional evidence of LNAPL was observed during investigations at this site (BL Companies 2007).

Based on the analytical results of the subsurface soil samples collected, two “Phase I Hotspots” (HS-1 and HS-2) were delineated at the site (see Attachment 9; BL Companies

2007). HS-1 was defined by TCE concentrations above NYSDEC TAGM 4046 criteria, and HS-2, predominately impacted by ethylbenzene, trimethylbenzene, and total xylene, was defined by VOC concentrations above NYSDEC TAGM 4046 criteria (BL Companies 2007). In March 2005, 19 additional soil borings were advanced in the two hotspot areas to further delineate subsurface soil contamination (BL Companies 2007). Subsurface soil samples were collected at depths ranging from 12 to 29 feet bgs and analyzed in the same manner, as described previously. In October 2006, as part of Phase II Hotspot Delineation, six additional soil borings were advanced in the vicinity of HS-1 and HS-2 to further delineate subsurface soil contamination (BL Companies 2007). Subsurface soil samples were collected at depths ranging from 17 to 45 feet bgs and analyzed in the same manner as described previously.

Results for soil samples collected during Phase I and Phase II Hotspot Delineation sampling events that exceeded their respective NYSDEC TAGM 4046 Recommended Soil Cleanup Objectives are summarized in the following table:

Analyte	Units	Maximum Soil Concentration	Sample Location
<b>VOCs</b>			
Acetone	ppb	840	GP-39
Methylene chloride	ppb	520	GP-39
trichloroethene (TCE)	ppb	44,000	GP-39
<b>SVOCs</b>			
2-methylnaphthalene	ppb	45,000	GP-43
Benzo(a)anthracene	ppb	1,700	MW-7
Benzo(a)pyrene	ppb	1,500	MW-7
Benzo(b)fluoranthene	ppb	1,200	MW-7
Dibenzo(a,h)anthracene	ppb	430	MW-7
<b>Metals</b>			
Lead	ppm	459	MW-7
Mercury	ppm	11.6	MW-7

Notes:

ppb – parts per billion

ppm – parts per million

SVOC – semi-volatile organic compound

VOC – volatile organic compound

VOC and SVOC concentrations exceeding NYSDEC TAGM 4046 criteria were detected in sampling locations located in both HS-1 and HS-2; however, VOC exceedances were predominately detected in the vicinity of HS-1, and SVOC concentration exceedances were predominately detected in off-site location MW-7.

### 9.1.2 Soil-Vapor Investigations

In January 2006, as part of Remedial Investigation field activities conducted at the site by BL Companies, four temporary soil vapor points were installed at the site (BL Companies 2007). Six soil vapor samples were collected in SUMMA® canisters and analyzed for VOCs by USEPA Method TO-15. In October 2006, four permanent soil vapor sampling probes were installed at the site to a depth of 6 feet bgs, and in November 2006, six soil vapor samples were collected from the permanent sampling locations (BL Companies 2007). Samples were collected in SUMMA® canisters and analyzed for VOCs by USEPA Method TO-15 plus helium. In February 2007, three additional soil vapor samples were collected and analyzed in the same manner as previously described (BL Companies 2007). Soil vapor sampling locations are illustrated in Attachment 7.

VOC concentrations were detected during each sampling event in each soil vapor sample collected. Results for soil vapor samples collected during each sampling event that exceeded their respective background indoor air values are summarized in the following table:

Analyte	Units	Maximum Soil Vapor Concentration	Sample Location
<b>VOCs</b>			
Carbon disulfide	µg/m <sup>3</sup>	110	SV-4
cis-1,2-dichloroethene	µg/m <sup>3</sup>	91	SV-4
Chloroform	µg/m <sup>3</sup>	54	SV-4
Methyl ethyl ketone	µg/m <sup>3</sup>	86	SV-1
Tetrachloroethene (PCE)	µg/m <sup>3</sup>	2,500	SV-4
Trichloroethene (TCE)	µg/m <sup>3</sup>	3,000	SV-4
Vinyl chloride	µg/m <sup>3</sup>	8.2	SV-2

Analyte	Units	Maximum Soil Vapor Concentration	Sample Location
<b>SVOCs</b>			
1,1-dichloroethene	µg/m <sup>3</sup>	10	SV-2
1,1-dichloroethane	µg/m <sup>3</sup>	450	SV-3
1,1,1-trichloroethane	µg/m <sup>3</sup>	280	SV-4
1,2-dichloroethene (total)	µg/m <sup>3</sup>	91	SV-4

Notes:

µg/m<sup>3</sup> – microgram per cubic meter

SVOC – semi-volatile organic compound

VOC – volatile organic compound

Soil vapor samples exhibiting the highest concentration of chlorinated hydrocarbons were collected from SV-4 located hydraulically cross-gradient of the site (BL Companies 2007; NYSDEC 2012).

### 9.1.3 Soil Summary

Soil investigations indicate historical subsurface soil contamination at the site.

Contamination at the site was delineated to two main areas, HS-1 and HS-2. VOCs and SVOCs exceeded NYSDEC TAGM 4046 criteria in both locations; however, HS-1 was defined by TCE exceedances, and HS-2 was defined by VOC exceedances, predominately ethylbenzene, trimethylbenzene and total xylene. LNAPL was observed in subsurface soils collected from two sampling locations; however, no additional evidence of LNAPL was observed during investigations at the site. Soil vapor samples collected at the site detected VOC concentrations in each sample collected and also detected VOCs exceeding background indoor air values at some locations.

## 9.2 Groundwater

Groundwater Investigations

☒ Yes ☐ No

NAPL Presence (Historical and Current)

☒ Yes ☐ No

Dissolved COPC Plumes

☐ Yes ☒ No

Visual Seep Sample Data

☐ Yes ☐ No ☒ Not Applicable

### 9.2.1 Groundwater Investigations

In November 2005, as part of Remedial Investigation field activities conducted at the site by BL Companies, five shallow groundwater monitoring wells were installed at the site to depths between 16 to 18 feet bgs (BL Companies 2007). In October and November 2006, one additional shallow groundwater monitor well and three deep wells were also installed at the site to depths between 7 to 17 feet bgs and 40 to 45 feet bgs, respectively (BL Companies 2007). Groundwater samples were collected from each well following installation and analyzed for some or all of the following: TCL VOCs by USEPA Method 8260B, trimethylbenzene by USEPA Method 8260B, TCL SVOCs by USEPA Method 8270, TAL metals by USEPA Method 6010B, and PCBs by USEPA Method 8082 (BL Companies 2007).

Results for groundwater samples collected during each sampling event that exceeded their respective NYSDEC TOGS Class GA groundwater standards are summarized in the following table:

Analyte	Units	Maximum Groundwater Concentration	Sample Location
<b>VOCs</b>			
1,2,4-trimethylbenzene	ppb	67	MW-5 (S)
Acetone	ppb	80	MW-12 (S)
Chloroethane	ppb	6.3	MW-5 (S)
cis-1,2-dichloroethene	ppb	1,000	MW-12 (S)
Methylene chloride	ppb	9.6	MW-12 (S)
Tetrachloroethene (PCE)	ppb	56	MW-10 (D)
Trans-1,2-dichloroethene	ppb	20	MW-12 (S)
trichloroethene (TCE)	ppb	1,600	MW-12 (S)
Vinyl chloride	ppb	25	MW-12 (S)
<b>Metals</b>			
Iron	ppb	39,900	MW-6 (S)
Lead	ppb	28.3	MW-7 (S)
Magnesium	ppb	93,400	MW-3 (S)
Manganese	ppb	17,300	MW-7 (S)
Nickel	ppb	23,300	MW-6 (S)

Analyte	Units	Maximum Groundwater Concentration	Sample Location
Sodium	ppb	245,000	MW-8 (S)
Thallium	ppb	10.8	MW-4 (S)
<b>Pesticides</b>			
Dieldrin	ppb	0.018	MW-3 (S)

## Notes:

D – deep groundwater well

ppb – parts per billion

S – shallow groundwater well

VOC – volatile organic compound

VOCs were detected at concentrations exceeding NYSDEC TOGS criteria in five of ten shallow groundwater samples collected and in each of the three deep groundwater samples collected. Groundwater samples collected from MW-12 located near and hydraulically cross-gradient of HS-1, contained the greatest number of VOCs detected above NYSDEC TOGS criteria and the highest concentrations of VOCs. SVOCs were not detected at concentrations exceeding NYSDEC TOGS criteria in groundwater samples collected.

### 9.2.2 **NAPL Presence (Historical & Current)**

No NAPL presence was detected in groundwater investigations conducted at the site. As part of Remedial Investigation field activities conducted at the site in November 2005 by BL Companies, LNAPL was observed in subsurface soils collected from two locations (BL Companies 2007). The LNAPL observed was described as either “free-phase product/oil” (i.e., NAPL saturation of soil interstitial pore spaces) or “oily” sheen (i.e., iridescent petroleum-like sheen; BL Companies 2007). No additional evidence of LNAPL was observed during investigations at this site (BL Companies 2007).

### 9.2.3 **Groundwater Summary**

Groundwater investigations indicate groundwater contamination at the site. VOC, metal, and pesticide concentrations were detected above NYSDEC TOGS criteria in samples collected at the site. VOC exceedances were detected in five of ten shallow groundwater samples collected and in each of the three deep groundwater samples collected. SVOCs were detected in groundwater samples collected, however, not in exceedance of NYSDEC TOGS criteria.

### 9.3 Surface Water

Surface Water Investigation

☐ Yes ☒ No

SPDES Permit (Current or Past)

☐ Yes ☒ No

Industrial Wastewater Discharge Permit (Current or Past)

☐ Yes ☒ No

Stormwater Data

☐ Yes ☒ No

Catch Basin Solids Data

☐ Yes ☒ No

Wastewater Data

☐ Yes ☒ No

#### 9.3.1 Stormwater and Wastewater Systems

This site is within the Newtown Creek WPCP sewershed. Stormwater and wastewater discharges from the site flow into two distinct combined municipal sewer systems. When combined flows exceed the system's capacity, untreated CSOs are discharged to the East River, which is outside of the Newtown Creek study area, and also to Newtown Creek at Outfall NC-015 (NYCDEP 2007).

### 9.4 Sediment

Creek Sediment Data

☐ Yes ☐ No ☒ Not Applicable

No sediment investigations have been conducted at the site.

### 9.5 Air

Air Permit

☐ Yes ☒ No

Air Data

☐ Yes ☒ No

No air investigations have been conducted at the site.

## 10 REMEDIATION HISTORY (INTERIM REMEDIAL MEASURES AND OTHER CLEANUPS)

Remedial actions were recommended in the 2007 Remedial Investigation Report based on soil, soil vapor, and groundwater investigations conducted at the site during the Phase I ESA, Phase II Site Investigation, Site Characterization, and Remedial Investigations (BL Companies 2007). The Remedial Action Work Plan (RAWP) presented details regarding



the recommended remedial actions (BL Companies 2007); however, the RAWP was not located in available documents. The RAWP was approved by NYSDEC and the New York State Department of Health in August 2008 (EDR 2010). As part of remedial design for the proposed remedy, a pilot study was completed to define design specifications for the proposed remedial actions, namely the air sparging (AS) and soil vapor extraction (SVE) systems (EDR 2010). A report detailing the AS/SVE system design was submitted in October 2008, and the Final Remedial Design was approved in February 2009 (EDR 2010). The NYSDEC Remediation Database indicates Remedial Action was completed at the site in December 2011, and a Brownfield Site Certificate of Completion was issued in 2011 (NYSDEC 2012). No further information on site remediation was located in available documents.

## 11 BIBLIOGRAPHY/INFORMATION SOURCES

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## 12 ATTACHMENTS

### Figures

Figure 1                      Site Vicinity Map: 353 McKibbin Street

### Tables

Table 1                      Potential Areas of Concern and Transport Pathways Assessment

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**Supplemental Attachments**

- Attachment 1      Figure SP-04a. Groundwater Table Elevation Contour Map – 11/23/05.  
BCP Site No. C224102 (BL Companies 2007)
- Attachment 2      Figure SP-04b. Groundwater Table Elevation Contour Map – 12/14/05.  
BCP Site No. C224102 (BL Companies 2007)
- Attachment 3      Figure SP-04c. Groundwater Table Elevation Contour Map – 11/16/06.  
BCP Site No. C224102 (BL Companies 2007)
- Attachment 4      Figure SP-04d. Shallow GW Table Elevation Contour Map – 1/3/07.  
BCP Site No. C224102 (BL Companies 2007)
- Attachment 5      Figure SP-05. Deep Groundwater Table Elevation Contour Map –  
11/16/06. BCP Site No. C224102 (BL Companies 2007)
- Attachment 6      Figure SP-05b. Deep Groundwater Table Elevation Contour Map –  
1/3/07. BCP Site No. C224102 (BL Companies 2007)
- Attachment 7      Figure SP-02. Test Boring and Monitoring Well Location Map. BCP  
Site No. C224102 (BL Companies 2007)
- Attachment 8      Figure SP-03. Areas of Concern. BCP Site No. C224102  
(BL Companies 2007)
- Attachment 9      Figure SP-06. Hotspot Location Map. BCP Site No. C224102  
(BL Companies 2007)

**Table 1**  
**Potential Areas of Concern and Transport Pathways Assessment – 353 McKibbin Street**

Potential Areas of Concern	Media Impacted					COPCs														Potential Complete Pathway						
	Surface Soil	Subsurface Soil	Groundwater	Catch Basin Solids	Creek Sediment	TPH				VOCs		SVOCs	PAHs	Phthalates	Phenolics	Metals	PCBs	Herbicides and Pesticides	Dioxins/Furans	Overland Transport	Groundwater	Direct Discharge – Overwater	Direct Discharge – Storm/Wastewater	Discharge to Sewer/CSO	Bank Erosion	Air Releases
						Gasoline-Range	Diesel – Range	Heavier – Range	Petroleum Related (e.g., BTEX)	VOCs	Chlorinated VOCs															
Description of Areas of Concern																										
Equipment and products used in chemical manufacturing and lacquer spraying practices and operations (including a drum disposal area) as investigated in RI	?	✓	✓	?	?	?	?	?	?	✓	✓	✓	✓	?	?	✓	?	✓	?	--	?	--	?	?	--	?

## Notes:

✓ – COPCs are/were present in areas of concern having a current or historical pathway that is determined to be complete or potentially complete.

? – There is not enough information to determine if COPC is/was present in area of concern or if pathway is complete.

-- – Current or historical pathway has been investigated and shown to be not present or incomplete.

BTEX – benzene, toluene, ethylbenzene, and xylene

COPC – constituent of potential concern

CSO – combined sewer overflow

PAH – polycyclic aromatic hydrocarbon

PCB – polychlorinated biphenyl

RI – Remedial Investigation

SVOC – semi-volatile organic compound

TPH – total petroleum hydrocarbon

VOC – volatile organic compound



G:\Jobs\110782-01 NewtownCreek\Maps\RI RemedialInvestigation\Historic Data Research\Site Features Mapbook.mxd ckblinger 5/23/2012 5:38:23 PM



⊙ USEPA Sample Locations (Surface and Subsurface)

— Shoreline (NYC Dept. of Information Technology, 2006)

— USGS Nat'l Elev. Dataset 5-foot Contours

Selected Site Property Boundary

Neighboring Site Property Boundary

**Outfall Class**

- Direct Discharge
- General
- Highway Drain
- Major Stormwater Outfall
- SPDES
- Storm Drain

**NOTES:**

1. Outfall Labeling: BB: Bowery Bay; NC(B/Q): Newtown Creek, Brooklyn/Queens; ST: Stormwater.

2. Outfall locations are preliminary, compiled, estimated data based on New York City Department of Environmental Protection (NYCDEP) maps and tabulated data and other resources. Many outfall locations were taken from the New York City Shoreline Survey Program: Newtown Creek Water Pollution Control Plant Drainage Area, NYCDEP, March 31, 2003. Other locations were taken from an excerpt from a similar report from 2008 (the complete report was not included in files available for review). Finally, some outfall locations were inherited from previous Anchor QEA and Newtown Creek Project work. Latitudinal and longitudinal data provided in the 2003 and 2008 NYCDEP reports were rounded to the nearest second. This resulted in potential outfall location discrepancies of up to approximately 200 feet. All outfall locations are currently under field verification.

3. Aerial Photos: New York State Division of Homeland Security and Emergency Services, 2010.

4. Site Boundaries are based on New York City parcels data.

5. Coarse topographic contours are derived from U.S. Geological Survey 10-meter data.

0 100 200 300 400

Feet



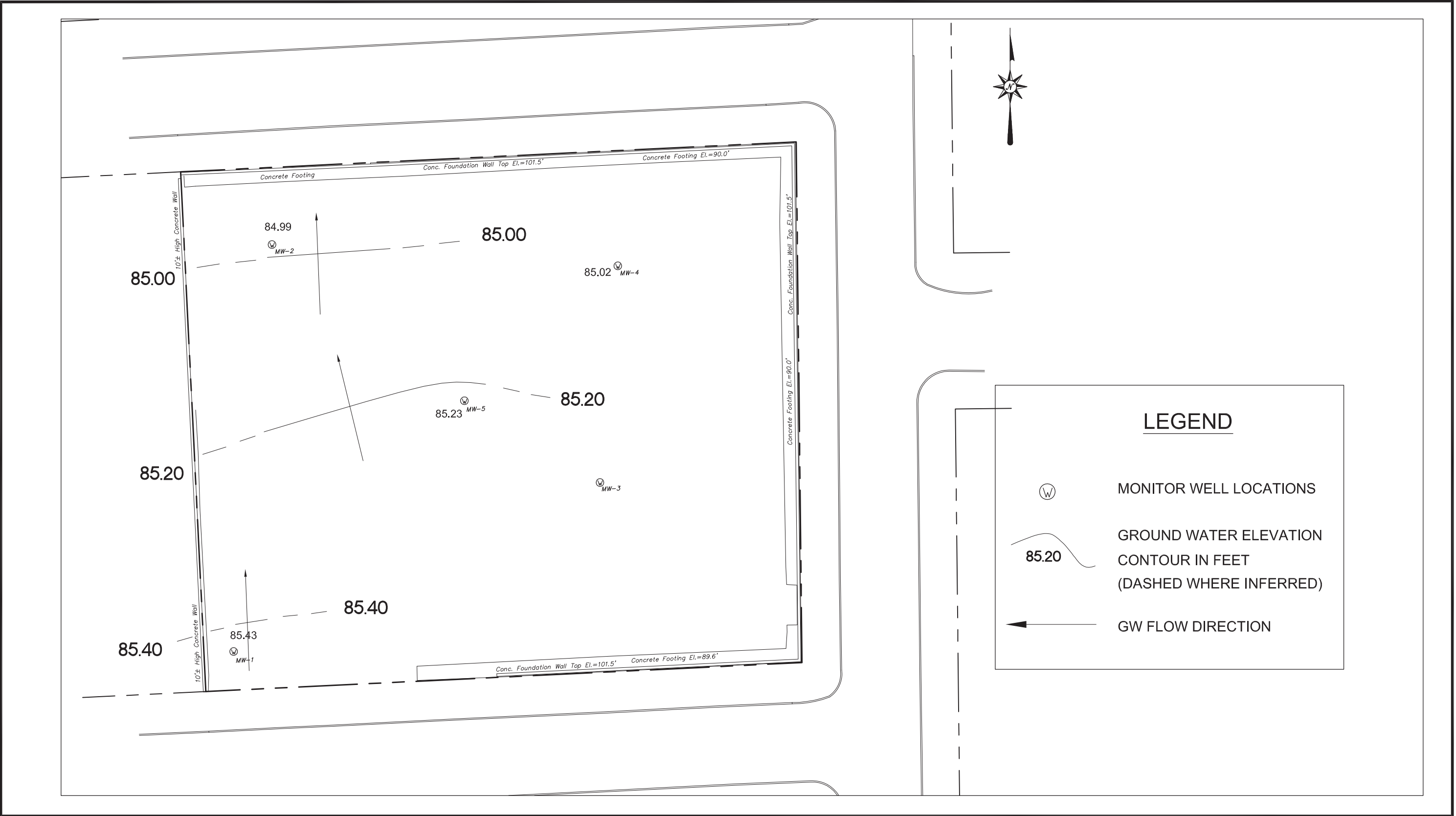
DRAFT

**Figure 1**  
Site Vicinity Map  
Draft Upland Site Summary: 353 McKibbin Street  
Newtown Creek RI/FS



## SUPPLEMENTAL ATTACHMENTS

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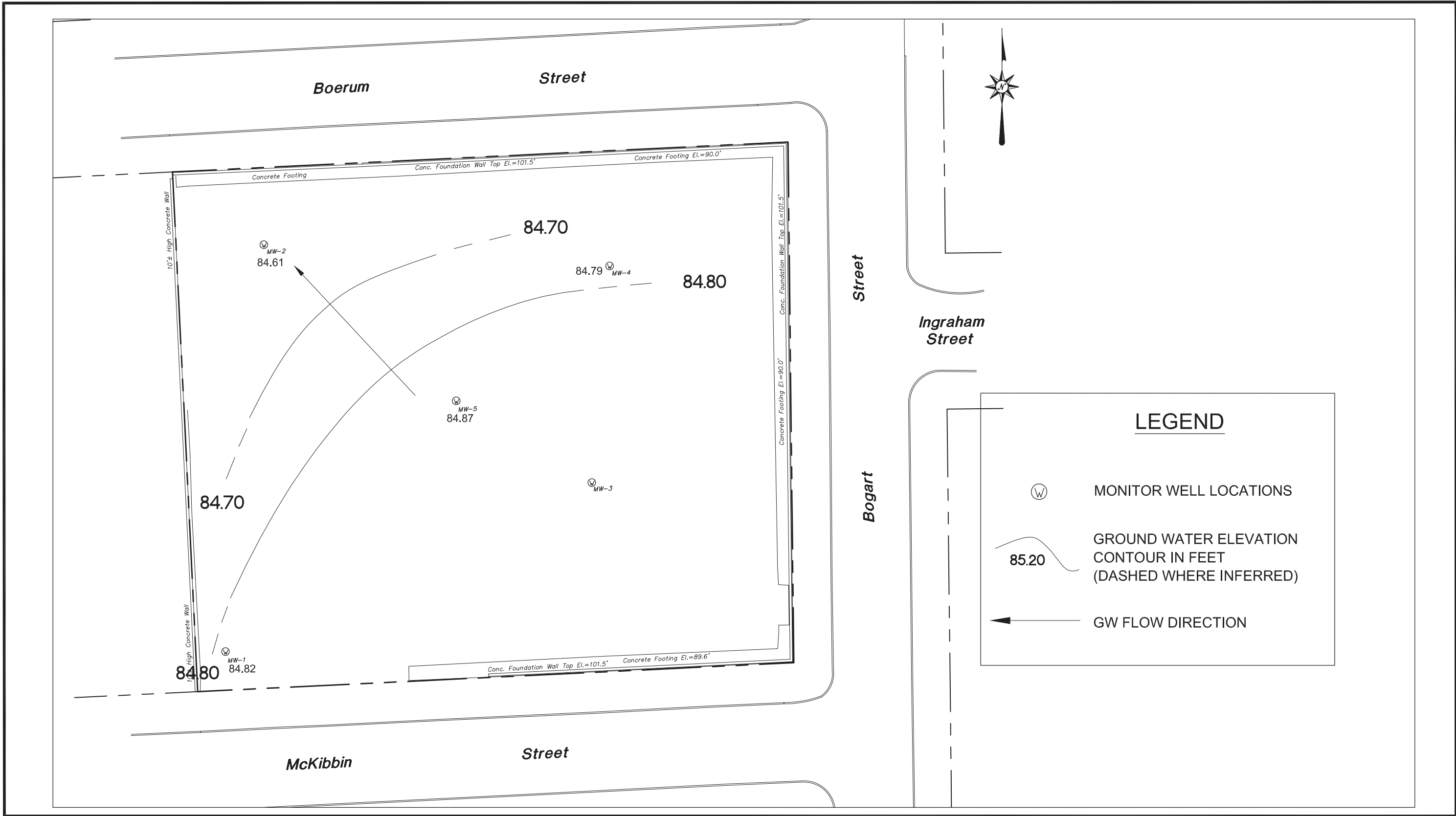
**GROUND WATER TABLE ELEVATION CONTOUR MAP - 11/23/05**

MEHADRIN / BCP SITE No. C224102  
353 McKIBBIN STREET  
BROOKLYN, NEW YORK

Designed  
Drawn  
Checked  
Approved  
Scale  
Project No.  
Date  
CAD File

C.S.  
N.C.T.  
  
1"=36'  
05L0567  
12/15/06  
N-DWG-SP04a-Mehadrin-05L0567-GWFlow1105-060213

**SP-04a**



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355 Research Parkway  
Meriden, CT 06450  
(203) 630-1406  
(203) 630-2615 Fax

**GROUND WATER TABLE ELEVATION CONTOUR MAP - 12/14/05**

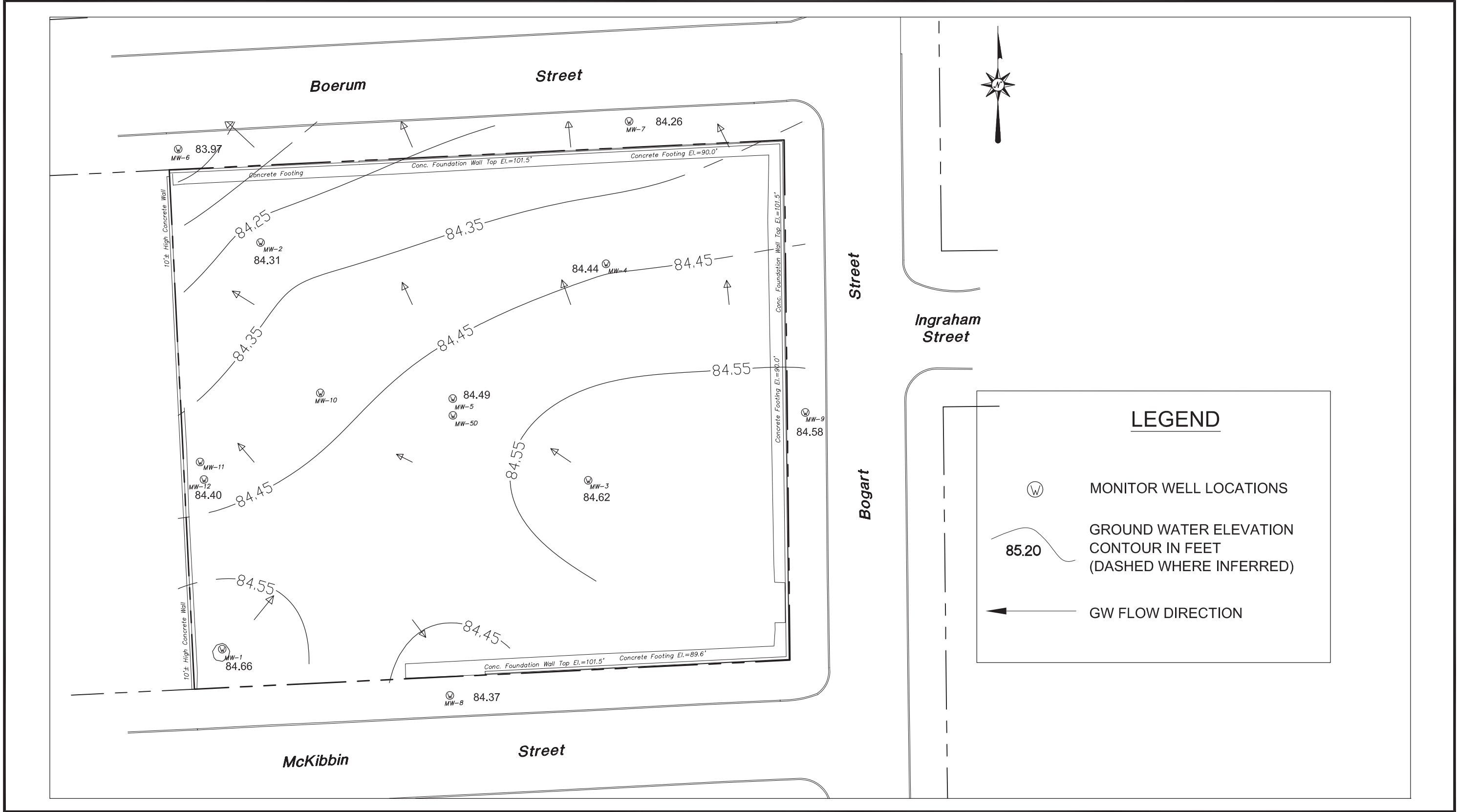
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353 McKIBBIN STREET  
BROOKLYN, NEW YORK

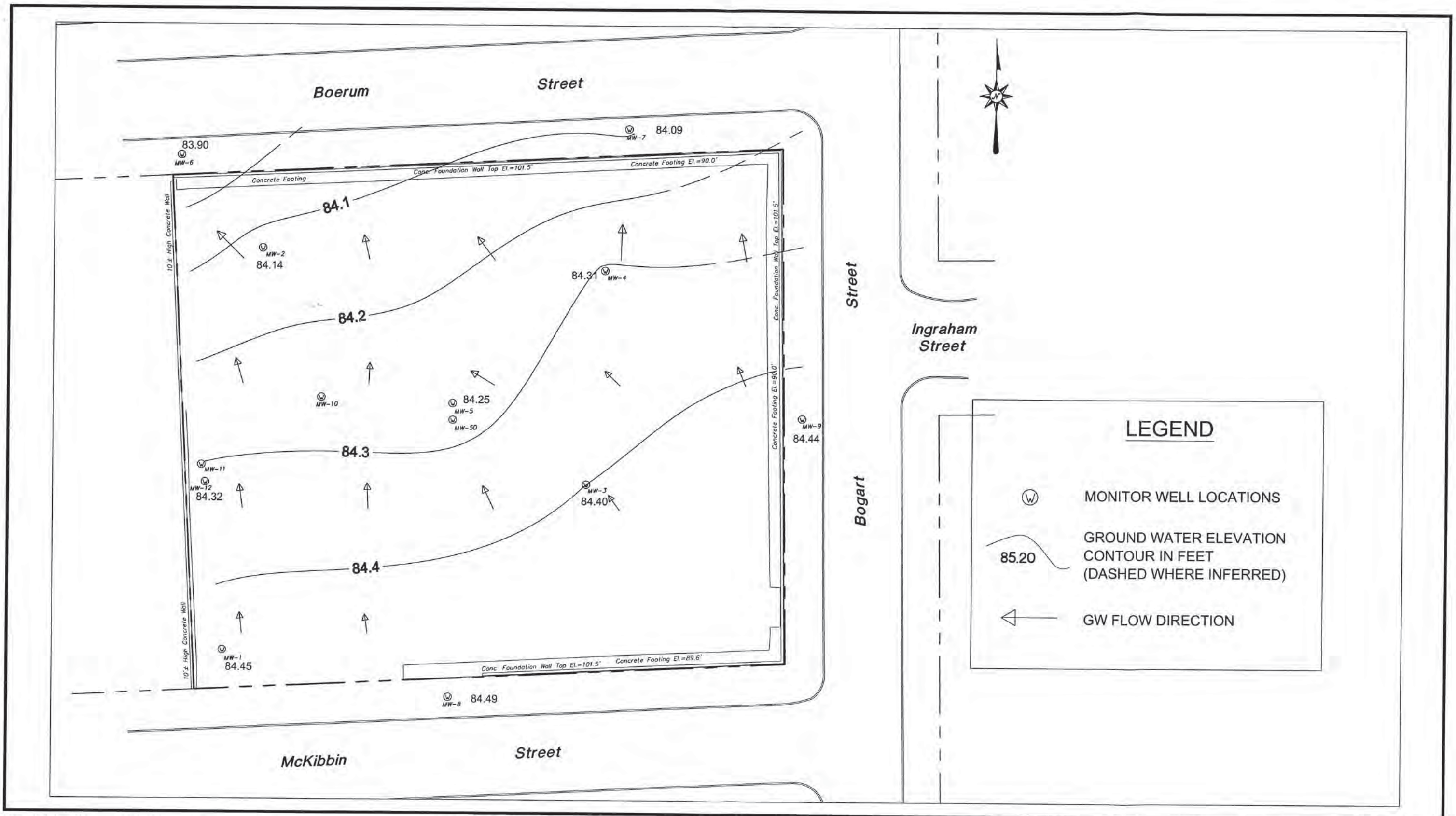
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Approved  
Scale  
Project No.  
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CAD File

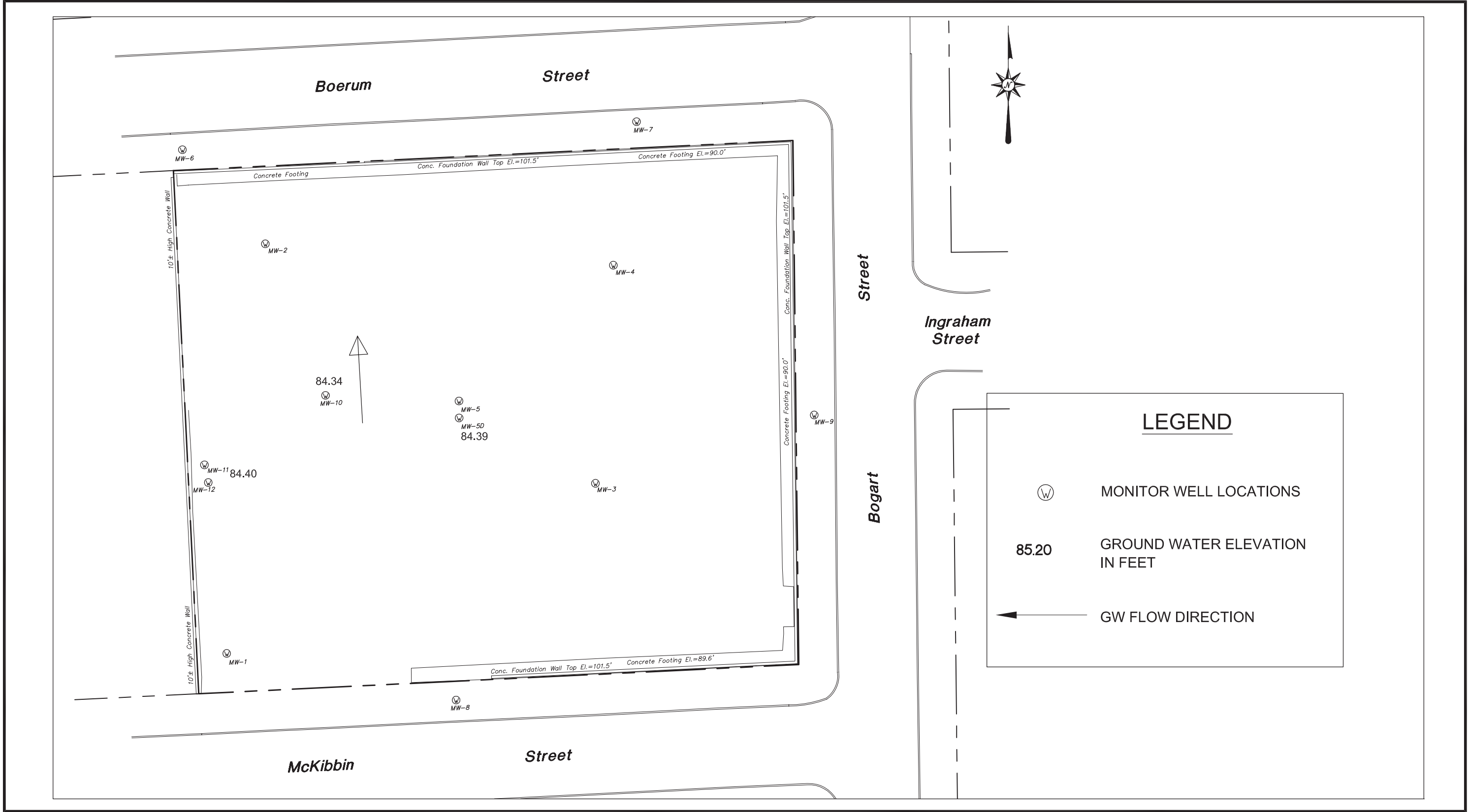
C.S.  
N.C.T.  
  
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05L0567  
12/15/06  
N-DWG-SP04b-Mehadrin-05L0567-GWFlow1205-060213

**SP-04b**

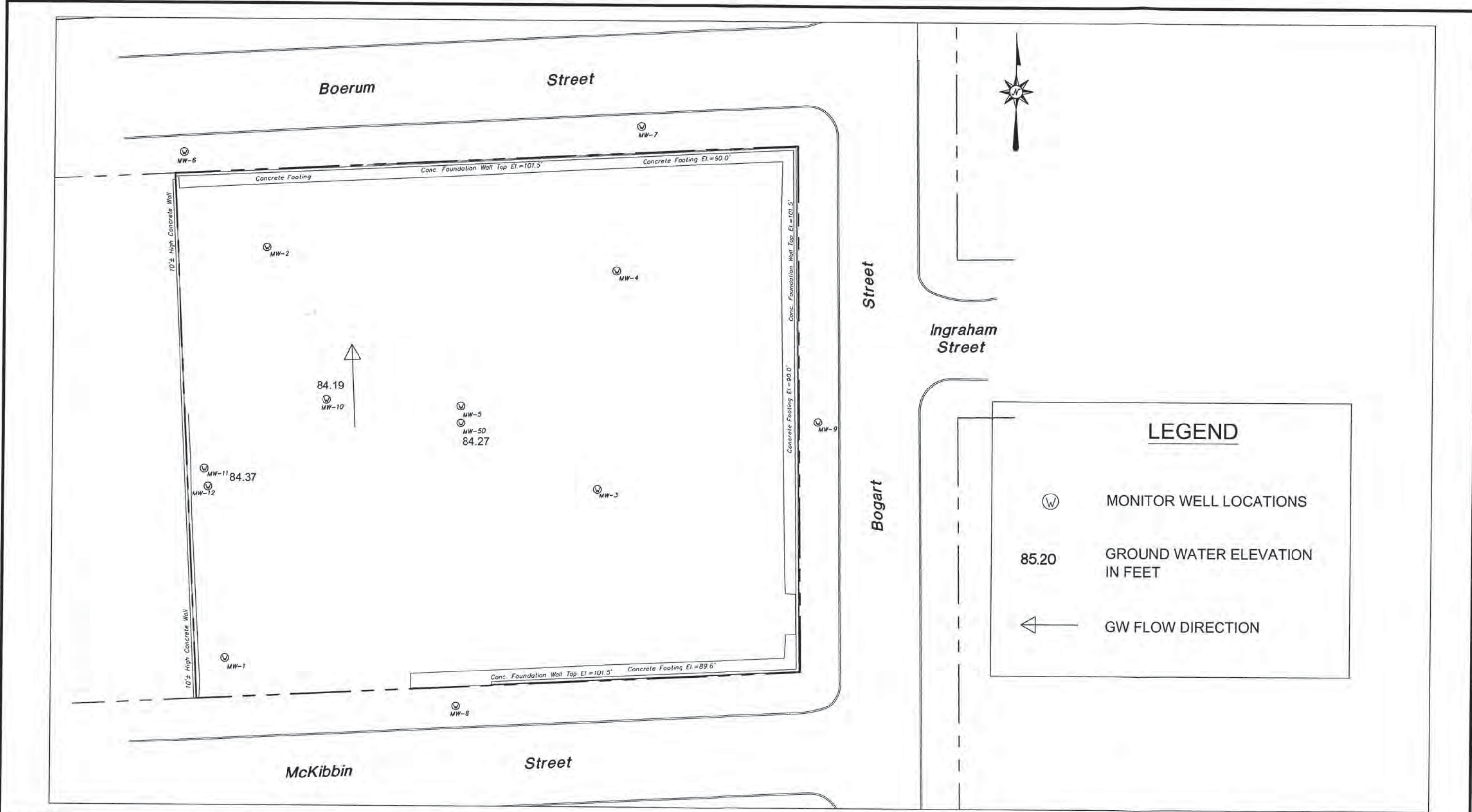












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355 Research Parkway  
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# DEEP GROUND WATER ELEVATION CONTOUR MAP - 1/3/07

MEHADRIN / BCP SITE No. C224102  
353 McKIBBIN STREET  
BROOKLYN, NEW YORK

Designed J.A.B.  
Drawn J.A.B.  
Checked  
Approved  
Scale 1"=36'  
Project No. 05L0567  
Date 3/1/07  
CAD File N-DWG-SP05b-Mehadrin-05L0567-GWFlowDeep-JAN-3-2007

## SP-05b

XREF(s): XXXXXXXX

